PRINT TO A CABINET IN CONTROLLER

Background of the Invention

This invention is directed to a system and method for storing print job data. More particularly, this invention is directed to a system and method for storing frequently printed documents in a page description language format in a storage location or cabinet to reduce the amount of hard drive space used.

In a work environment or other settings, many documents are printed frequently without any changes made to the content. These documents are generally stored on the printer controller or other suitable storage medium. However, these documents are generally saved after raster image processing and are saved as image files. Saving a document as an image file requires a large amount of storage space. Controllers and other suitable storage mediums have limited space for storing documents which creates a problem for storing large numbers of image files. In addition, printing an image file requires much processing as the image file must be converted to a face file again.

It is desirable to have a system and method for storing frequently printed documents in a manner which does not require a large amount of storage space or processing time.

Summary of the Invention

In accordance with the present invention, there is provided a system and method for storing frequently printed documents in a manner which does not require a large amount of storage space or processing time.

Further, in accordance with the present invention, there is provided a system and method for storing frequently printed documents in a page description language format in a storage location or cabinet to reduce the amount of storage space required.

Still further, in accordance with the present invention, there is provided a system for storing of print job data comprising means adapted for acquiring print job data representative of a desired print job, which print job data is comprised of a page description language format associated with a selected printer device, storage means adapted for selectively storing the print

job data in a selected storage location or cabinet, and means adapted for acquiring print status information including data representative of a name associated with the print job data and data representative of a size of the print job data. The storage means includes means adapted for selectively storing the print status information associatively with the print job data. The system also comprises means adapted for selectively communicating the print job data to generate an image for display in an associated display device and means adapted for selectively communicating the print job data to the selected printer device to obtain a printout thereof.

Still further, in accordance with the present invention, there is provided a method for storing of print job data comprising the steps of acquiring print job data representative of a desired print job, which print job data is comprised of a page description language format associated with a selected printer device and selectively storing the print job data in a selected storage location or cabinet in a storage medium. The method further comprises acquiring print status information including data representative of a name associated with the print job data and data representative of a size of the print job data and selectively storing the print status information associatively with the print job data. The method also comprises selectively communicating the print job data to generate an image for display in an associated display device and selectively communicating the print job data to the selected printer device to obtain a printout thereof.

In a preferred embodiment, the system and method comprise multiple storage locations or cabinets for storing print job data. In one embodiment, a default storage location is selected by an administrative user or other suitable means for storing print job data. In another embodiment, an associated user selects a desired storage location or cabinet for storing print job data associated with the user. Preferably, the parameters for the print job are selected by the user by any suitable means. In addition, in a preferred embodiment, the print job data stored in at least one storage location is displayed.

These and other aspects, features, and advantages of the present invention will be understood by one skilled in the art upon reading and understanding the specification.

Brief Description of the Drawings

Figure 1 is a block diagram depicting an exemplary network for the method and implementation of the present invention.

Figure 2 is a flow chart illustrating the method according to the present invention.

Figure 3 is sample template for selecting special printing options according to the present invention.

Figure 4 is a sample template for selecting storing the print job data in a storage location or cabinet.

Figure 5 is a sample template for selecting the storage location to store the print job data.

Figure 6 is a sample template for selecting the print job data within a storage location for printing or modifying the parameters associated therewith.

Figure 7 is a sample template for selecting the parameters for a print job.

Detailed Description of the Preferred Embodiments

This invention is directed to a system and method for storing print job data in a specified storage location or cabinet. The system and method store frequently printed documents in a suitable page description language format to a storage location or cabinet to reduce the amount of hard drive space used, as well as to provide a mechanism for quickly generating additional high-quality printouts as is particularly useful for frequently printed documents. Although discussed with reference to printer devices and print jobs, the system and method of the present invention is suitable for any image generating device and imaging job to optimize routing of the imaging jobs to the image generating device on the network available and having the smallest queue.

An exemplary network 100 is shown in Figure 1 for deploying the method and implementation of the present invention. One or more client machines, as illustrated by machines 102 and 104, send print job requests which are received and responded to by controller/server 106. A suitable client machine is any suitable networked computer or data terminal as will be appreciated by one of ordinary skill in the art. The print job requests include a request to store the print job to a storage location. The controller governs access to the printer devices 108, 110, 112 attached to the network. The controller includes a storage medium for storing print jobs shown as 114. The storage medium comprises at least one specified storage location or cabinet 116. Preferably, the storage medium comprises up to sixty four storage locations or cabinets. Once the controller receives the print job request to store the print job to a storage location, the controller stores the print job in the specified storage location. When the

controller receives the request to print the print job, the controller then routes the print job to the printer device and the printer device prints the print job.

Figure 2 shows a flow chart 200 illustrating the method according to the present invention. At 202, an associated user sends a print job request to the controller via any suitable means. The user specifies in the print job request that the print job should be printed to a storage location or cabinet as shown at 204. Figure 3 shows a sample template 300 for selecting special printing options available to the user. The user selects the option Special Print Jobs 302. Once the option Special Print Jobs is selected, the user selects the available special print jobs. Figure 4 shows a sample template 400 for selecting the special print jobs. The user selects the option Cabinets 402 to store the print job in a storage location or cabinet.

At 206, the storage location or cabinet is selected in which the print job will be stored. In one embodiment, a default storage location is selected by any suitable means, such as by an administrative user. In one embodiment, the default storage location stores all print jobs that have requested the option to print to a storage location. In another embodiment, the default storage location is suitably associated with at least one associated user. All print jobs from that at least one use that have requested the option to print to a storage location are stored in that storage location.

In another embodiment, the storage location or cabinet in which to store the print job is selected by the user via any suitable means. Figure 5 shows a sample template 500 for selecting the storage location or cabinet to store the print job. The user selects the desired storage location or cabinet 502, 504, 506, 508, and 510 to store the print job. The user may scroll up and down the display for additional storage locations by using the up arrow 514 and the down arrow 516. The user then selects Print 512 to store the print job to that cabinet. The user may return to the previous screen by selecting Back 518.

In a preferred embodiment, the storage locations or cabinets are password protected. In this embodiment, the user is prompted for the appropriate password by any suitable means. The user then enters the password by any suitable means. If the user does not enter the password correctly, the user may not access the storage location or cabinet or store any print jobs in that storage location or cabinet.

At 208, the print job request for printing to a storage location or cabinet is sent to the controller. The print job request and storage location information are sent as part of the printer job language.

The controller receives the print request at 210 and parses the printer job language for the specified job type to print or store the print job in a storage location or cabinet. At 212, the controller stores the print job in the desired located. The controller either uses the default storage location or the storage location selected by the user. In either event, the controller stores the print job in the specified storage location or cabinet in page description language or other suitable format.

At 216, the job manager or other suitable means sends a message via any suitable means to the raster image processor to perform raster image processing on the print job. At 218, the raster image processor performs raster image processing on the print job without creating image files and updates the print job status associated with the print job in the storage location or cabinet.

The print job may be printer by a printer device attached to the network at any time. To print the print job, the user selects the option to print the print job to an associated printer device by any suitable means as shown at 218. Preferably, the user selects a storage location from which a document is to be printer by any suitable means. As shown in Figure 5, the user selects the storage location from 502, 504, 506, 508, and 510. Once the user has selected the storage location, the user selects the Open button 512 to display the contents of the storage location.

The user then selects the desired print job stored in the storage location. Figure 6 is a sample template 600 for selecting the print job to be printed. The user selects the desired print job from 602 and 604 as shown. The user may scroll up and down the display for additional print jobs by using the up arrows 606, 608 and the down arrows 610, 612. In a preferred embodiment, the print jobs are sorted on the display by any suitable means by name or date and time. Once the user has selected the print job to be printed, the user selects Print to print the print job with the settings and options as specified in the page description language for the print job. The user may return to the previous screen to select a different storage location by selecting the Back button 614.

The print job is transmitted to the printer device as shown at 220 and the print job is printed by the printer device as shown at 222.

In a preferred embodiment, the user is able to select the parameters for the print job to be stored in the storage location by any suitable means. As shown in Figure 6, the user selects the print job 602, 604 for which the parameters are to chosen. Once the user has selected the print job, the user selects the Properties button 616. Figure 7 shows a sample template 700 for selecting the parameters. The user may select the number of copies 702 wherein the user inputs a desired number by any suitable means. The user may select the stapling options by selecting button 704. The user may select the printing method, such as simplex, by selecting button 706. The user may select the alignment of the hole punching by selecting button 708. The user may change the name of the print job by selecting button 710. The user may also merge two print jobs by selecting button 712. The user may then print the print job with current settings by selecting Print 714. The user may also cancel the settings entered by selecting Cancel 716.

As described hereinabove, the present invention solves many problems associated with previous type methods and implementations. However, it will be appreciated that various changes in the details, materials and arrangements of parts which have been herein described and illustrated in order to explain the nature of the invention may be made by those skilled in the are within the principle and scope of the invention will be expressed in the appended claims.